

BEST AVAILABLE COPY

09/848,246

1-6. (CANCELED)

7. (CURRENTLY AMENDED) A method of manufacturing an optical fiber including a silica glass fiber, the method comprising the steps of:

spinning a heated silica glass fiber from a base material;

irradiating the silica glass fiber with ultraviolet radiation to purposefully for ~~an irradiating time period approximately equal to an amount of irradiation time period required to lower a UV transmittance value of the silica glass fiber to no more than a predetermined UV transmittance value of the silica glass fiber so as to create multiple~~ structural defects in the silica glass fiber;

applying an insulation coating around the silica glass fiber; and

using residual heat from the spinning step to ~~remove the multiple structural defects purposefully created by the irradiating step and thereby to improve a resistance of the silica for a heating time period approximately equal to an amount of heating time required to shift a peak point of infrared absorption of the glass fiber to ultraviolet radiation a higher frequency side within a range from about 2255 cm⁻¹ to about 2275 cm⁻¹.~~

8-24. (CANCELED).

25. (CURRENTLY AMENDED) A method of manufacturing an optical fiber including a silica glass fiber, the method comprising the steps of:

heating and spinning a silica glass fiber from a base material;

irradiating the silica glass fiber with ultraviolet radiation to purposefully ~~cause of a single wavelength for an irradiating time period approximately equal to an amount of irradiation time required to lower a UV transmittance value of the silica glass fiber to no more than a predetermined UV transmittance value of the silica glass fiber so as to create multiple structural defects in the silica glass fiber; and~~

~~improving a resistance of removing the multiple structural defects created by the silica glass fiber to ultraviolet radiation irradiating step by using residual heat from the spinning step to remove the multiple structural defects purposefully caused by the irradiating step; maintain the silica glass fiber at a temperature of a range from at least 300°C to approximately 1300°C.~~

09/848,246

26. (CURRENTLY AMENDED) A method of manufacturing an optical fiber including a silica glass fiber, the method comprising the steps of:

heating and spinning a silica glass fiber from a base material;

irradiating the silica glass fiber with ultraviolet radiation, having a single wave length of between 150 to 200 nanometers ~~and an intensity of 1 to 30 mJ/cm², for an irradiating time period approximately equal to an amount of irradiation time required to lower a UV transmittance value of the silica glass fiber to no more than a predetermined UV transmittance value of the silica glass fiber so as to create multiple structural defects in the silica glass fiber following spinning of the silica glass fiber;~~

~~applying an insulation coating around the silica glass fiber; and one of prior to and after applying the insulation coating, using residual heat, from the heating and spinning step, to maintain and~~

maintaining the silica glass fiber at a temperature of between 300°C to 1300 degrees centigrade, C by using residual heat from the heating and spinning step so as to remove the multiple structural defects caused by the irradiating step and thereby improve a resistance of the silica glass fiber to ultraviolet radiation.

27. (CURRENTLY AMENDED) The method of manufacturing the optical fiber according to claim 26, further comprising ~~[[the]]~~ a step of irradiating the silica glass fiber immediately following spinning of the silica glass fiber.

28. (CURRENTLY AMENDED) The method of manufacturing the optical fiber according to claim 26, further comprising ~~[[the]]~~ a step of performing the method to prevent deterioration of transmittance of the silica glass due to radioactive radiation.

29. (CURRENTLY AMENDED) The method of manufacturing the optical fiber according to claim 26, further comprising ~~[[the]]~~ a step of continuing irradiation of the silica glass fiber, with the ultraviolet radiation, until the silica glass fiber has a sufficiently reduced ultraviolet transmittance.

30. (CURRENTLY AMENDED) The method of manufacturing the optical fiber according to claim 26, further comprising ~~the step of manufacturing the silica glass fiber from a silica glass core having a silica glass and fluorine clad layer surrounded by the~~ a step of applying a fluorine-containing clad layer and applying an insulation coating.

31. (CURRENTLY AMENDED) The method of manufacturing the optical fiber according to claim 30, further comprising ~~the step of manufacturing wherein the insulation coating [[from]] is one of gold and aluminum.~~

11/05/2004 16:31 AM

09/848,246

32. (CANCELED)

33. (NEW) The method of manufacturing the optical fiber according to claim 26, further comprising a step of applying an insulation coating around the silica glass fiber.

34. (NEW) The method of manufacturing the optical fiber according to claim 33, wherein the step of applying an insulation coating around the silica glass fiber is prior to the step of maintaining the silica glass fiber at a temperature of between 300°C to 1300°C by using residual heat from the heating and spinning step.

35. (NEW) The method of manufacturing the optical fiber according to claim 33, wherein the insulation coating is a material consisting of one of gold and aluminum.

36. (NEW) The method of manufacturing the optical fiber according to claim 34, wherein the insulation coating is a material consisting of one of gold and aluminum.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☒ **FADED TEXT OR DRAWING**
- ☒ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.